SAS Journal of Medicine
Abbreviated Key Title: SAS J Med
ISSN 2454-5112
Journal homepage: https://saspublishers.com

OPEN ACCESS

Medicine

Management of a Case of Fournier's Gangrene at the Reference Health Center of Markala

Koné O[1*], Kanthé D[1], Samaké Y[6], Fomba D[1], Samaké B[2], Keita M[2], Bakayolo T.B[2] Ongoiba S[8], Sissoko I[4], Ballo B[3], Malle K[5], Diakité ML[7]

[1]Markala Reference Health Center, Mali
[2]Regional Hospital of Nianankoro Fomba, Segou, Mali
[3]Koutiala Reference Health Center, Mali
[4]Commune 1 Reference Health Center, Mali
[5]Regional Health Directorate of Segou
[6]Fana Reference Health Center, Mali
[7]Point.G University Hospital, Mali
[8]Gavardo Hospital of Bamako, Mali

DOI: 10.36347/sasjm.2023.v09i06.004 | **Received:** 26.04.2023 | **Accepted:** 30.05.2023 | **Published:** 02.06.2023

***Corresponding author:** Koné O
Markala Reference Health Center, Mali

Abstract **Case Report**

We report a case of expansive external genitalia gangrene in the abdominal region at the Csréf of Markala. Our patient was 32 years old, three germs were isolated Escherichia coli, Pseudomonas auriginosa and Staphylococcus aureus which were all sensitive to imipenems, Levofloxacin, Ofloxacin. An enlarged debridement plus scrotal bipartition and discharge cystotomy were performed as surgical procedures. Good healing without sequelae after scrotoplasty and local care.

Keywords: Fournier's gangrene, debridement, urological medical-surgical emergency, Markala Reference Health Center.

INTRODUCTION

Fournier's gangrene (FG) is a rapidly progressive necrotizing fasciitis of the external genitalia and perineum, which is fatal in 20-80% of cases and has a severe prognosis despite the progress of therapeutic measures [1]. It is usually a multi-microbial infection [3-4], the source of which may be cutaneous, urogenital or colorectal [3, 5]. The clinical picture is noisy and polymorphous, with fever, prostration, erythema, scrotal oedema and typical scrotal crepitations, all of which are life-threatening in the short term [6]. Treatment is a real medical, surgical and urological emergency in order to slow down the evolution and avoid morbidity, which most often requires multidisciplinary management, taking into account the aggressiveness and rapidity of the evolution to ensure the patient's survival. In view of the literature, several other major challenges remain to be met, in particular the healing and aesthetics of the affected areas, at the cost of leaving indelible after-effects that may affect some patients for life [7]. We report a case of expansive external genitalia gangrene in the abdominal region to add our mall experience in the management.

CLINICAL OBSERVATION

We present the medical file of a 32 year old farmer living in a village in our health areas with no particular medical or surgical history, admitted to the emergency room of the Markala Reference Health Centre for pain, swelling and tissue necrosis of the penoscrotal region, which began about 7 days ago with the onset of a sensation of discomfort in the form of pruritus often requiring the patient to scratch several times.This was followed by a sudden onset of peri-scrotal pain, spontaneous, in the form of tenesmus radiating towards the urogenital region, making walking impossible. After several attempts at traditional treatments, he decided to consult the CSCom in their village, which referred him to us for better care.

On admission we found a perineoscrotal swelling with tissue necrosis associated with fulminant involvement of the hypogastric region. On inspection

the patient was lethargic with normal vital parameters. Examination of the external genitalia revealed extensive swelling of the bursa and penis with necrotic skin patches associated with multiple small pockets of pus. The swelling extended to the hypogastric region, which was palpated with severe pain (Fig. 1).

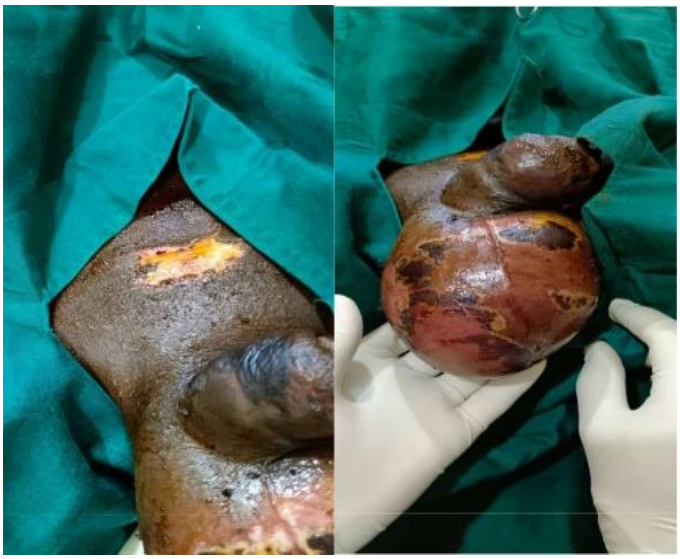

Figure 1: Patient in the operating room with necrositing fasciitis of the perineum and external genitalia

The diagnosis of Fournier's gangrene of the external genitalia expanding into the hypogastric region was made.

Para-clinical and etiological data

We performed a pus swab at the time of debridement which allowed us to isolate three causative organisms: Escherichia coli, Pseudomonas auriginosa and Staphylococcus aureus, all of which were sensitive to imipenems, Levofloxacin and Ofloxacin. The haemogram was normal with a haemoglobin level of 13g/dl and a haematocrit of 40.3%. Fasting blood glucose was normal, HIV serology was negative and the rest of the blood work-up was unremarkable.

Therapeutic data

We proceeded to a wide debridement of the necrotic tissues plus a bipartition of the external genitalia, a discharge cystotomy was performed, under locoregional anaesthesia plus resuscitation measures. As a preventive measure, the patient was given a serum tetanus vaccination with 3000 IU of serum IM and 0.5 IU of vaccine subcutaneously. In the operating room we used two antiseptics, 20% hydrogen peroxide, which is an antioxidant, and Dakin antiseptic solution. Antibiotic therapy was adapted to the antibiogram, the patient received injectable antibiotics for 10 days, IVD Imipenem, Levofloxacin, by injection. At D43 post-op, we noted a good evolution of the surgical wound with a budding. The abdominal edges were brought together after avivement and a scrotoplasty to integrate the two testicles into the sockets and local care allowed directed healing to be achieved after 3 months. Analgesics and anti-inflammatories were administered in the absence of contraindications.

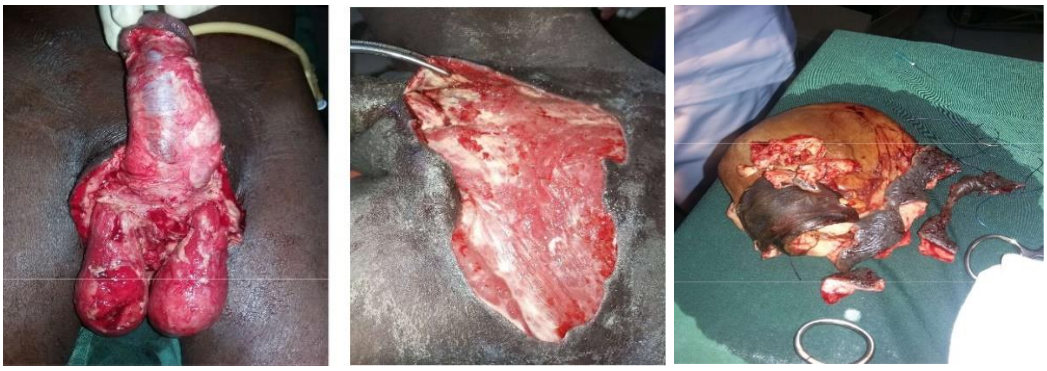

Figure 2: Different phases of evolution

Figure 3: Post operartory (Surgical specimen after debridement)

DISCUSSION

The profile of patients with Fournier's gangrene in the literature has highlighted the importance of early management, the need for good broad-spectrum probabilistic antibiotic therapy, and the need for extensive debridement of infected tissue. Our patient was 32 years old which is lower than that of Maoneo *et al* [1] and those described by Kabanga *et al.* [2]. This allows us to conclude that gangrene can occur at any age. The delay of consultation of patients varies from one patient to another, and our patient consulted around the 7ème day of the evolution, as the condition was already affecting the genitoperineal region, as described by Jean Alfred Fournier [5]; it extends more easily to the anterior wall of the abdomen because of the similarity and contiguity of the perineal and abdominal fascias and the anaerobic conditions [2].

The aetiologies are multiple and the starting point can be spontaneous, traumatic or operative, which can lead to Fournier's gangrene [3], these risk factors act indirectly by depressing the immune system to favour the occurrence of this disease. This suggests that any skin injury to the perineum can lead to gangrene. Good antibiotic therapy directed against the germs combined with exhaustive debridement can slow down the spread. Medical resuscitation should consist of hydro-electrolyte balance and heparin therapy; anti-tetanus serotherapy should be used as a preventive measure. Extended necrosectomy and scrotal bipartition have prevented postoperative sequelae. The healing of the wound was satisfactory.

CONCLUSION

Fournier's gangrene is a rare but very serious medical-surgical and urological emergency. Its mortality rate remains high and is linked to the precocity of the diagnosis and the therapeutic measures. The early search for aggravating factors in the diagnosis and rapid and effective management can considerably reduce major complications such as sepsis.

REFERENCES

1. Maoneo, A., Talona, L., Baonga, L., Mtoro, M., Lokangu, K., Esiso, A., Fataki, B., Kasereka, F., Yekonda, F., Mata, D., & Wami, W'Ifongo. (2017). *Fournier gangren: etiology, clinical, para-clinical and treatment by Israël Maoneo Azabali.*
2. Kabanga, K. T., Punga, M. M., & Lufuma, K. S. (2004). Gangrene of the male external genitalia: experience from the university clinics of Kinshasa. *Congo Médical. 3*(3), 1214-1219.
3. Sarkis, P., Farran, F., Khoury, R., Kamel, G., Nemr, E., Biajini, J., & Merheje, S. (2008). Fournier's gangrene: a review of the recent literature. *Elsevier Masson SAS. 19*(2), 75-84.
4. Mallikajuna, M. N., Vijayakumar, A., Patil, V.S, & Shivswamy, B.S. (2012). *Fournier's gangrene: Current practices*. ISRN Surgery.
5. Hubert, J., Fournier, G., Mangin, P., Pungamaole, M. (1995). Gangrene of the external genitalia. *Progress in Urology, 5*, 911-24.
6. Benjelloun, E. B., Souiki, T., Yakla, N., Ousadden, A., Mazaz, K., Louchi, A., ... & Taleb, K. A. (2013). Fournier's gangrene: our experience with 50 patients and analysis of factors affecting mortality. *World journal of emergency surgery*, *8*, 1-5.
7. Mallikarjuna, M. N., Vijayakumar, A., Patil, V. S., & Shivswamy, B. S. (2012). Fournier's gangrene: current practices. *International Scholarly Research Notices*, *2012*.
8. Hubert, J., Fournier, G., Mangin, P., & Pungamaole, M. (1995). Gangrene of the external genitalia. *Progress in Urology*, *5*, 911-24.
9. Benizri, E. (1992). Perineal gangrene. Analysis of 24 observations. *Prog. Urol*, *2*, 882-891.
10. Clayton, M. D., Fowler Jr, J. E., Sharifi, R. O. O. H. O. L. L. A. H., & Pearl, R. K. (1990). Causes, presentation and survival of fifty-seven patients with necrotizing fasciitis of the male genitalia. *Surgery, gynecology & obstetrics*, *170*(1), 49-55.
11. Takassi, E., Anoukoum, T., James, K., & Attipou, K. (2012). The treatment of Fournier's gangrene: about 64 cases. J.Rech.Sci.Univ. *Lomé (Togo), 14* (1), 119-23.
12. Yong, Y.P., & Kumar, V. (2011). Case report: Fournier's gangrene complicating diverticular colovesical fistula. Bjui.